

ADDITIONS TO THE OHIO LIST OF DRAGONFLIES (ODONATA)

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In my annotated list of the dragonflies of Ohio¹ 127 species were recorded. During 1937 two species not previously recorded for the state were collected, bringing the total to 129. These two species are as follows:

128. *Macromia pacifica* Hagen. 1 ♀, August 9, 1937, J. Fred Williams. This specimen was taken from the radiator of an automobile, which had picked it up while going from Indian Lake to Columbus. This insect was probably picked up by the automobile in Logan County. This species is primarily a western species, but has been reported as far east as Indiana.

129. *Enallagma basidens* Calvert. 7 ♂ and 4 ♀, June 26, 1937, and 2 ♂, May 30, 1938, by D. J. Borror, at a gravel pit pool about two miles southeast of Germantown, in Montgomery County; 16 ♂ and 15 ♀, August 21, 1937, by D. J. Borror, at a gravel pit pool about one mile north of Miamiville, in Clermont County. It is of considerable interest that this species should be taken in southwestern Ohio, as it was described from Texas and up until a few years ago was known only from the southwestern part of the United States. In 1929 Mr. B. Elwood Montgomery took it in Indiana,² and he reports³ that since then it has become more abundant in Indiana. It appears that this species is extending its range northward and eastward.

Since the publication of my annotated list of Ohio dragonflies, a number of new county records have been obtained which extend our knowledge of the distribution of dragonflies in the state. These records are based primarily on the results of five collecting trips: to Hocking Co., June 6, 1937, by Dale W. Jenkins and the writer; to Licking, Coshocton, Tuscarawas, Wayne, and Ashland counties, June 13-15, 1937, by Dale W. Jenkins and the writer; to Montgomery, Warren, and Butler counties, June 26, 1937, by R. Henry Kyle and the writer; to Fayette, Clinton, Brown, Clermont, and Butler counties,

¹Borror, Donald J. 1937. An annotated list of the dragonflies (Odonata) of Ohio. Ohio Jour. Sci., 37 (3): 185-196.

²Montgomery, B. Elwood. 1932. Records of Indiana dragonflies, VI, 1931. Proc. Ind. Acad. Sci., 41: 449-454.

³*Id.*, *op. cit.*, 43: 215, 1934; 44: 233, 1935; 46: 207, 1937.

August 21, 1937, by W. Donald Murray and the writer; and to Montgomery Co., May 30, 1938, by R. Henry Kyle and the writer. All material collected on these trips is in the writer's collection.

The sources of the new records obtained other than on the above trips are indicated in each case. The following abbreviations are used: BJ, collected by Dale W. Jenkins and the writer and in the writer's collection; DJB, collected by the writer and in his collection; DWJ, collected by Dale W. Jenkins and in the writer's collection; OES, in the collection of the Ohio Agricultural Experiment Station at Wooster; VEG, collected by Vernon E. Gifford and in his collection. County records in *italics* are based on sight only, with no specimens collected.

The new county records are as follows (the species are numbered as in my 1937 annotated list):

2. *Gomphoides obscura* (Rambur).⁴ Hocking.
9. *Gomphus* (*Gomphus*) *exilis* Selys. Wayne (OES).
10. *G. (Gomphurus) fraternus* (Say). Wayne (OES).
14. *G. (Gomphus) lividus* Selys. Franklin (BJ), Wayne.
18. *G. (Gomphus) spicatus* Hagen. Ashland. This record extends the latest date for the capture of the species in Ohio to June 15.
22. *G. (Arigomphus) villosipes* Selys. Wayne (OES).
24. *Dromogomphus spinosus* Selys. Delaware (BJ).
28. *Basiaeschna janata* (Say). Wayne. This record extends the latest date for the capture of the species in Ohio to June 15.
31. *Anax junius* (Drury). Ashland, Butler, Clermont.
34. *Epiaeschna heros* (Fabricius). Wayne (OES).
36. *Aeshna constricta* Say. Wayne (OES).
38. *A. umbrosa* Walker. Cuyahoga (VEG).
43. *Cordulegaster obliquus* (Say). Hocking, Jackson (DWJ). May 22 to July 15.
44. *Macromia illinoiensis* Walsh. Licking.
49. *Epicordulia princeps* (Hagen). Ashland, Clermont, Clinton, Montgomery, Wayne (OES).
50. *Tetragoneuria cynosura* (Say). Ashland, Coshocton, Hocking, Wayne.
54. *Perithemis tenera* (Say). Butler, Clermont, Montgomery, Wayne, (OES).
55. *Celithemis elisa* (Hagen). Clermont, Montgomery, Wayne (OES). The Clermont Co. record extends the latest date for the capture of the species in Ohio to August 21.
56. *Celithemis eponina* (Drury). Clermont. This record extends the latest date for the occurrence of the species in Ohio to August 21.

⁴This species was erroneously placed in the genus *Negomphoides* in my 1937 list.

62. *Libellula (Holotania) cyanea* Fabricius. Perry (in the collection of the Ohio State University).
64. *L. (H.) luctuosa* Burmeister. Ashland, Butler, Clermont, Clinton, Hocking, Montgomery, Wayne (OES).
65. *L. (Plathemis) lydia* Drury. Ashland, Butler, Wayne.
66. *L. (Neotetrum) pulchella* Drury. Ashland, Butler, Clermont, Montgomery.
68. *L. (Eolibellula) semifasciata* Burmeister. Wayne.
70. *Sympetrum ambiguum* (Rambur). Butler, Clinton.
73. *S. rubicundulum* (Say). Butler, Montgomery, Wayne (OES). The Montgomery Co. record extends the earliest date for the capture of the species in Ohio to May 30.
78. *Pachydiplax longipennis* (Burmeister). Ashland, Butler, Montgomery, Wayne (OES).
79. *Erythemis simplicicollis* (Say). Ashland, Clermont, Clinton, Fayette, Montgomery, Wayne (OES).
80. *Pantala flavescens* (Fabricius). Cuyahoga (VEG).
82. *Trapezostigma carolina* (Linnaeus).⁵ Montgomery.
83. *Trapezostigma lacerata* (Hagen).⁵ Butler, Clermont, Hocking, Montgomery, Wayne.
87. *Calopteryx maculatum* (Beauvais). Brown, Butler, Huron (OES), Montgomery, Warren. The Brown Co. record extends the latest date for the capture of the species in Ohio to August 21.
88. *Hetaerina americana* (Fabricius). Brown, Clermont, Montgomery, Warren, Wayne (OES).
95. *Lestes inaequalis* Walsh. Ashland.
96. *L. rectangularis* Say. Ashland, Butler, Clinton, Fayette, Hocking, Montgomery, Tuscarawas, Wayne (OES).
97. *L. uncatus* Kirby. Ashland, Wayne.
98. *L. unguiculatus* Hagen. Butler, Lucas (collected by Joe Bailey, and in the collection of the Museum of Zoology at Ann Arbor), Wayne (OES).
100. *Argia apicalis* (Say). Clermont, Fayette, Tuscarawas, Warren.
102. *A. moesta* (Hagen). Brown, Clermont, Montgomery, Vinton (DJB), Warren.
103. *A. sedula* (Hagen). Brown, Clermont.
104. *A. tibialis* (Rambur). Coshocton, Tuscarawas, Wayne.
105. *A. violacea* (Hagen). Butler, Clermont, Montgomery, Warren.
109. *Chromagrion conditum* (Hagen). Hocking.
110. *Enallagma antennatum* (Say). Montgomery.
113. *E. carunculatum* Morse. Wayne (OES).
114. *E. civile* (Hagen). Clermont, Montgomery.
118. *E. exsulans* (Hagen). Brown, Clermont, Coshocton, Warren, Wayne.
119. *E. geminatum* Kellicott. Ashland, Clermont, Montgomery.
120. *E. hageni* (Walsh). Ashland.

⁵Cowley, J. 1935. Nomenclature of Odonata: three generic names of Hagen. The Entomologist, 68: 283-284. According to Cowley, the genus *Tramea* Hagen, 1861, must be replaced by *Trapezostigma* Hagen, 1849.

121. *E. signatum* (Hagen). Ashland, Clermont, Montgomery,
Wayne (OES).
123. *E. vesperum* Calvert. Ashland.
124. *Ischnura posita* (Hagen). Ashland.
126. *I. verticalis* (Say). Ashland, Brown, Clermont, Montgomery,
Warren.
127. *Anomalagrion hastatum* (Say). Montgomery.
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